## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: Patent Application of

CROMBACH et al            Atty Ref: **4662-330**

Serial No. **10/501,733**          Group: **1711**

Filed: **February 11, 2005**       Examiner: **LISTVOYB**

For: **SOLID-STATE POST-CONDENSATION PROCESS FOR INCREASING THE MOLECULAR WEIGHT OF A POLYAMIDE**

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Commissioner for Patents
P.O.Box 1450
Alexandria, VA 22313-1450

# Statutory Declaration

Sir:

The undersigned, Rudy Rulkens, hereby declares and states pursuant to 37 CFR §1.132 that:

1.     I am a named coinventor of the above-identified U.S. Patent Application Serial No. 10/501,733 ("the '733 application").

2.     For all times relevant to the facts stated herein, I have been employed by DSM in the position of Research scientist.

3.     On information and belief, I understand that US Patent No. 5,859,177 (Berger *et al*) has been cited and applied by the U.S. Patent Examiner to reject the pending claims in the '733 application as anticipated under 35 USC §102(b).

4.     Under my direction and control, each of Example 1 and Example 2 ($T_{dew}$=13°C) disclosed in Berger *et al* was repeated so as to determine $VN_{int}$ as a percentage of $VN_{end}$. The methodology and results of the repeated experiment is attached as Exhibit RR-1.

5.     The experimental result for Example 1 was that $VN_{int}$ is 99% of $VN_{end}$.

6.     The experimental result for Example 2 ($T_{dew}$=13°C) was that $VN_{int}$ is 97% of $VN_{end}$.

7.     I have read amended claim 1 dated October 17, 2007 and conclude that such claim is not anticipated by Berger et al since Example 1 of Berger *et al* does not provide a $VN_{int}$ which is at most 90% of $VN_{end}$. Instead as noted above, repeating Example 1

and Example 2 ($T_{dew}$=13°C) of Berger *et al* resulted in a $VN_{int}$ which is 99% and 97% of $VN_{end}$ respectively.

8.  I declare further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

**Signature**

Rudy Rulkens

**Date signed**     17.04.08

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# Exhibit RR-1

## Comparative experiment based upon Examples 1 and 2 in US 5,859,177

<u>Experimental detail</u>

Material:              Polyamide 6,6
Sample size:           100 grams

<u>Methodology</u>

A static bed column was used equipped with a heating mantle, a gas inlet and a gas outlet. The gas used for the experiment was provided at a flowrate of 2300 g/h during the heating and solid state post condensation and 4500 g/h during the cooling phase. Water was added in such quantities to match the dew temperature regarding preheated nitrogen stream into a specially designed evaporator unit. After exiting the mixed $N_2$ / $H_2O$ stream was heated to the required temperature together with the wall of the static bed.

The sample was inserted into a metal cylindrical holder with a diameter of 7 cm. The holder was inserted into the column after the column had been flushed with a stream of nitrogen at room temperature. During the heating phase, the sample temperature was set to the solid state post-condensation step temperature (195°C for example 1 and 189°C for example 2) from which the heating profile is derived from. During cooling all gas settings were set at room temperature 20 minutes before the temperature in the middle of the granule bed started to drop.
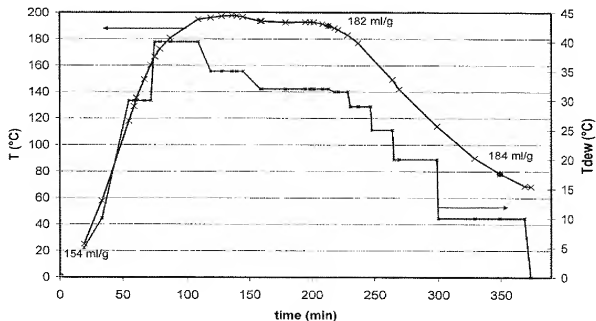
<u>Results</u>
Repetition of Example 1 of US Patent No. 5,859,177
Viscosity number (intermediate) $VN_{int}$ :              182
Viscosity number (end) $VN_{end}$              184
Values determined according to ISO 307, with the values the average of duplicate analyses.
$VN_{int}$ is 99% of $VN_{end}$

Figure 1 is a graphical illustration of the course of the postcondensation and cool down according to Example 1 in US 5,859,177



Repetition of Example 2 of US Patent No. 5,859,177

Viscosity number (intermediate) $VN_{int}$ :       177

Viscosity number (end) $VN_{end}$              183

Values determined according to ISO 307, with the values the average of duplicate analyses.

$VN_{int}$ is 97% of $VN_{end}$

Figure 2 is a graphical illustration of the course of the postcondensation and cool down according to Example 2 in US 5,859,177